

Amendments To The Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-24 (Cancelled).

25. (Currently Amended) A handling unit (1) for palletizing, characterised by comprising:

a support (2) for coupling to manipulator means;

a framework (3) associated with said support (2) and defining an aperture;

a pair of parallel opposing slide rails (5) fixed to said framework (3);

at least one flexible sliding panel (7) slidable along said rails (5) between an extended position in which it completely closes the panel extends over said aperture to enable it the panel to support articles to be palletized, and a retracted position in which it the panel opens said aperture to enable said articles to fall through said aperture;

drive means (18, 19) for sliding which slide said panel (7) along said pair of opposing rails (5), characterized by further comprising wherein said rails have a first longitudinal section of said rails (5) that extends along two opposing circumferential circular arc portions and a second

longitudinal section thereof that extends along two opposing horizontal-opposing portions, said sliding panel (7) occupying only the first section of the rails extending along the two circumferential circular arc portions when in its slid into the retracted position.

26. (Currently Amended) A handling unit (1) as claimed in claim 25, wherein said sliding panel (7) occupies only the second section of the rails extending along the two horizontal portions when in the extended position.

27. (Currently Amended) A handling unit (1) as claimed in claim 26, wherein said framework (3)—comprises—has a pair of vertical opposing side walls (4) defining said aperture therebetween.

28. (Currently Amended) A handling unit (1) as claimed in claim 27, wherein said horizontal portions of the second section of the rails (5) are fixed respectively to the inner sides of the pair of side walls (4).

29. (Currently Amended) A handling unit (1) as claimed in claim 25, wherein said drive means—comprise—has at least one movable motor (18) rotating a first movable drive pinion (19) engaging a first fixed circumferential rack (20) with which one of the opposing—circumferential circular arc

portions of the first section of the rails (5) is associated.

30. (Currently Amended) A handling unit (1) as claimed in claim 29, wherein said first drive pinion (19) is axially keyed via a shaft (21) to a second movable pinion (22) engaging a second fixed circumferential rack (23) with which the remaining opposing ~~circumferential~~ circular arc portions of the first section of the rails (5) are associated.

31. (Currently Amended) A handling unit (1) as claimed in claim 30, wherein said first pinion (19) and said second pinion (22) are maintained constantly engaged with said first rack (20) and with said second rack (23) respectively, by a pair of rigid arms (24) rotatably associated with a pair of ~~circular-elements~~ protective walls (6) coaxial with the ~~circumferential~~ circular arc portions of the first section of the rails (5).

32. (Previously Presented) A handling unit (1) as claimed in claim 31, wherein said first pinion (19) and said second pinion (22) are respectively associated with one end of said sliding panel (7) by a pair of opposing connecting rods (25).

33. (Currently Amended) A handling unit (1) as claimed in claim 25, wherein said sliding panel ~~comprises~~ has

a plurality of parallel cylindrical rods transverse to the sliding direction, connected together in pairs by offset chain links (9, 10).

34. (Previously Presented) A handling unit (1) as claimed in claim 33, wherein the ends of said rods (8) are rotatably associated with wheels (16) which roll within said rails (5).

35. (Previously Presented) A handling unit (1) as claimed in claim 25, comprising a pair of mutually facing sliding panels (7') slidable along a pair of mutually facing rails (5) between a position in which said panels (7') are positioned mutually abutting to completely close said aperture and a retracted position in which they are mutually withdrawn to open said aperture.

36. (Previously Presented) A handling unit (1) as claimed in claim 25, wherein said manipulator means comprise a robot.

37. (Previously Presented) A palletizer robot comprising a handling unit in accordance with claim 25.

38. (Previously Presented) A handling unit (1) as claimed in claim 25, comprising loading means for dragging

articles to be palletized onto said panel (7) when in its extended position.

39. (Previously Presented) A handling unit (1) as claimed in claim 38, wherein said loading means comprise a loading carriage (32) slidably associated with the framework (3).

40. (Previously Presented) A handling unit (1) as claimed in claim 39, wherein said loading carriage (32) presents a quadrangular configuration with its opposing sides adjustable towards and away from each other.

41. (Previously Presented) A handling unit (1) as claimed in claim 25, further comprising means for taking and releasing slip sheets.

42. (Previously Presented) A handling unit (1) as claimed in claim 41, wherein said means for picking up and releasing slip sheets comprise a pantograph structure (40) carrying a plurality of suckers (45) for adhering to the surface of a slip sheet (200).

43. (Previously Presented) A handling unit (1) as claimed in claim 42, wherein said suckers (45) are associated with venturi valves (45) for creating vacuum within the cavities of the suckers (45).

44. (Previously Presented) A handling unit (1) as claimed in claim 42, wherein each sucker (45) is driven by a cylinder (55).

45. (Previously Presented) A handling unit (1) as claimed in claim 25, further comprising means for picking up and releasing surrounds.

46. (Previously Presented) A handling unit (1) as claimed in claim 45, wherein said means for picking up and releasing surrounds comprise two opposing pairs of rocker members (60) with which means (68) are associated for engaging the surround.

47. (Previously Presented) A handling unit (1) as claimed in claim 46, wherein said rocker members (60) are pivoted on a pair of plates (62) which can be moved upwards away from the aperture and downwards towards the aperture.